

A NEW SPECIES OF *SCORTUM* WHITLEY (PISCES: TERAPONTIDAE) FROM THE NORTHERN TERRITORY, AUSTRALIA.

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ABSTRACT

A new species of grunter (Terapontidae) is described from fresh waters of the Northern Territory, Australia. *Scortum neili* sp. nov. is described on the basis of 11 specimens collected from a tributary of the Angalarri River, and from the East Baines River, in the Victoria River system of the Timor Sea drainage. It is distinguished from the other three species of *Scortum* by a combination of features including counts of transverse cheek scale rows, scales in longitudinal series above the lateral line, and gill rakers on the first arch.

KEYWORDS: Northern Territory, Terapontidae, *Scortum*, new species, freshwater.

INTRODUCTION

The Indo-west Pacific fish family Terapontidae (formerly Teraponidae) was reviewed by Vari (1978) who recognised 15 genera and 37 species, including 23 purely freshwater forms from Australia-New Guinea. Since his revision of the family, four additional species were described, one from Irian Jaya (Allen 1984), another from the Gulf of Carpentaria drainage of Queensland (Allen and Merriek 1984), and two from the Kimberley region of Western Australia (Vari and Hutchins 1978). The present paper describes a new species from Australian fresh water referable to the genus *Scortum* Whitley as defined by Vari. The majority of specimens were collected by one of us (H.M.) during an ichthyological survey of the Angalarri River, Northern Territory, in September 1981 (Midgley 1981). The holotype was gill-netted during an aquatic survey of Gregory National Park, carried out in conjunction with the Conservation Commission of the Northern Territory and "Operation Raleigh". Although unaccompanied by descriptive information, this species was briefly treated (as *Scortum* sp.) by Merriek and Schmida (1984) and Allen (1989). The name, *Scortum neilii*, appeared in Midgley's 1981 report (pp.8-9). On page 8, Midgley stated that the name is an

unpublished manuscript name. The name has also appeared, as a *nomen nudum*, in several publications (Larson and Martin 1990, as *Scortum neilii*; Jackson 1990, as *Scortum neili*). John Merriek, of Macquarie University, Sydney, is preparing a revision of Australian freshwater terapontids, and will discuss the relationships of this species with other species of *Scortum*.

The format and terminology used in our description follow those of Vari (1978). The range of counts and proportional measurements for the paratypes are indicated in parentheses following the data for the holotype. Proportional measurements and counts for fin rays, gill rakers, and lateral-line scales are summarised in Table 1. Type specimens are deposited at the Australian Museum, Sydney (AMS); Northern Territory Museum of Arts and Sciences, Darwin (NTM); and the Western Australian Museum, Perth (WAM).

SYSTEMATICS

Scortum neili sp. nov.
(Fig. 1)

Type Material. HOLOTYPE - NTMS.11869-005, 220 mm SL, Limestone Gorge, East Baines River, Northern Territory (16° 02'S 130° 24'E),

gillnet, 0-3 m water depth, H. Larson and party, 25 June 1986.

PARATYPES - NTM S.13094-001, 78.7 mm SL, tributary of Angalarri River, Victoria River system, about 87 km NNE of Timber Creek, Northern Territory, Australia (approximately 14° 59'S, 130°56'E), scine, H. and M. Midgley, 12-13 September 1981; NTM S.13094-002, 3 specimens, 76.6-81.2 mm SL, same data as preceding; AMS I.39873-001, 3 specimens, 73.5-86.8 mm SL, same data as preceding; WAM P. 30285-001, 3 specimens, 78.3-86.3 mm SL, same data as preceding.

Diagnosis. A species of *Scortum* with the following combination of characters: transverse scale rows on cheek 5 or 6; scales in longitudinal series above lateral line 62 to 73; gill rakers on first arch 11 to 13 + 23 to 27 = 35 to 40; maximum standard length about 220 mm.

Description. Dorsal rays XIII, 11 (XIII, 9 to 12); anal rays III, 9 (III, 7 to 9); pectoral rays 16 (16 or 17); pelvic rays 1, 5; scales in longitudinal series just above lateral line 73 (62 to 73); tubed lateral-line scales 52 (49 to 52), with 3-6 additional tubed scales on base of caudal fin; transverse scales above lateral line 10 (9 to 11); transverse scales below lateral line 20 (17 to 21); predorsal scales to occiput 18 (18 to 20); sheath scale rows at base of dorsal fin 3 (1 to 3); sheath scale rows at base of anal fin 4 (3 or 4); scale rows on cheek 5 (5 or 6); gill rakers on first arch 13 + 26 = 39 (11 to 13 + 25 to 27 = 37 to 40); vertebrae 11 + 14.

Body moderately deep for the family and laterally compressed, greatest depth 2.7 (2.8 to 3.0) in SL. Head relatively short with more or less pointed snout, its length 3.4 (2.9 to 3.1) in SL. Distance from dorsal origin to snout 2.7 (2.5 to 2.6), length of base of dorsal fin 1.8 (1.7 to 1.8), both in SL. Snout length 3.3 (3.5 to 3.8), eye width 5.2 (3.5 to 4.2), interorbital width 3.2 (3.1 to 3.5), maxillary length 3.4 (3.3 to 3.6), length of longest (fifth) dorsal spine 2.5 (1.7 to 2.1), length of longest (first to sixth) soft dorsal rays 2.2 (2.0 to 2.4), length of longest (second) anal spine 2.0 (1.6 to 1.8), length of longest (first or second) soft anal ray 2.0 (1.9 to 2.2), length of pectoral fin 1.4 (1.5 to 1.7), length of pelvic fin 1.3 (1.4 to 1.6), length of caudal fin 1.1 (1.2 to

1.4), least depth of caudal peduncle 2.5 (2.9 to 3.2), length of caudal peduncle 1.9 (1.7 to 2.0), all in head length.

Dorsal profile curving abruptly, much more pronounced than ventral profile. Dorsal contour straight from snout to interorbital region, then convexly curving to origin of dorsal fin. Ventral profile only slightly curved from tip of lower jaw to pelvic fin origin, straight from pelvic base to anus. Jaws equal, or upper jaw just slightly longer. Gape nearly horizontal. Mouth small, nonprotractile. Upper posterior edge of maxillary hidden under lacrimal. Maxillary reaching to level of posterior nostril (anterior edge of eye or slightly posteriorly in paratypes). Teeth somewhat flattened with pointed tips, depressible and arranged in broad band in each jaw. Outer row of teeth much enlarged compared to inner teeth. Inner band of teeth less flattened and embedded in fleshy inner surface of mouth. Vomer and palatines without teeth. Nostrils separated by a distance about equal to greatest diameter of posterior nostril. Nostrils with fleshy rim, that of anterior nostril forming an enlarged flap posteriorly. Lacrimal with several small serrations. Preoperculum distinctly serrate; serrations largest on angle. A pair of flattened spines on upper edge of opercle, the lower spine stronger and longer, but not extending beyond edge of opercular lobe. Post temporal and supracleithrum exposed, their margins smooth or weakly crenulate.

Spinous dorsal fin arched, the first spine very short, fourth to sixth spines longest, those following decreasing gradually in length to penultimate which is shorter than ultimate. Longest dorsal spine usually longer than longest soft dorsal rays. Soft dorsal fin rounded. Second anal spine about twice length of first anal spine, longer and much stronger than third spine, slightly longer than longest soft anal rays. Pectoral fins pointed, fourth or fifth ray (from top) longest. Pelvic fins pointed, first soft ray longest and slightly filamentous, but not reaching anus. Caudal fin emarginate.

Colour in life. Uniform silvery grey, or with one or two randomly scattered black blotches (see below). Freshly captured specimens also with about 10 light vertical bars on the sides.

Table 1. Fin ray and lateral-line scale counts for *Scortum neilli* sp. nov.

Soft dorsal rays			Soft anal rays			Pectoral rays		Lateral-line scales			
9	11	12	7	8	9	16	17	49	50	51	52
1	2	8	1	2	8	8	3	1	3	4	3



Fig. 1. *Scortum neili* sp.nov., holotype, 220 mm SL.

Colour in alcohol. Overall light brownish grey grading to whitish on ventral surface; silvery stripe across lacrimal, just below eye; usually one to two randomly scattered black blotches on side, blotches vary in size from less than pupil diameter to greater than eye width; of the 20 body sides represented in 10 type specimens seven are unmarked, 10 with a single blotch, and three with two spots. Holotype with two blotches on upper centre of left side, and a single large blotch near caudal base on right side, also several indistinct small black marks (on left opercle, upper left caudal peduncle, upper membranous corner of right opercle).

Comparisons. Vari (1978) recognised three species of *Scortum*: *S. barcoo* (McCulloch and Waite) from the Gulf of Carpentaria and Central Australian drainage systems, *S. hilli* (Castelnau) from the Fitzroy River system of eastern Queensland, and *S. parviceps* (Macleay) from the Burdekin River system of eastern Queensland. *Scortum barcoo* has since been recorded from the Roper, Limmen Bight and McArthur River systems in the Northern Territory (Midgley 1979).

Scortum neili is distinguishable from these species by the following characters: it has larger scales than *S. barcoo* (5-6 transverse rows on cheek and 62-70 above the lateral line versus 7-8 and about 80 respectively for *S. barcoo*), it differs from *S. parviceps* in having more gill rakers on the first arch (11-13 + 23-27, usually 12-13 + 25-27 versus 9-12 + 19-23 for *S. parviceps*), and it has a longer second anal spine than *S. hilli* (1.6-1.8 in SL versus 1.8-2.2 for *S. hilli*); this spine is also generally longer than in other *Scortum* species (2.0-2.2 in *S. barcoo* and 2.2-2.5 in *S. parviceps*).

Distribution. *Scortum neili* is presently known only from the East Baines and Angalarri Rivers, both of which drain into the Victoria River.

Ecology. The Angalarri River locality consisted of a narrow (to 10 m width) flowing stream with pools up to 300 m in length joined by very shallow rocky sections. The stream was well shaded by a fringe of overhanging trees and the bottom was composed of silt, sand, and stones. The fish were captured at depths to about 1-2 m, but mainly in less than 0.75 m. Water temperature ranged from 28°C at the surface to 26.5°C at a depth of 1 m. The following water chemistry values were recorded: pH 7.9; conductivity (total dissolved solids) 265 ppm; Methyl orange alkalinity 257 ppm; calcium ion hardness 103 ppm; magnesium ion hardness 137 ppm; total hardness 240 ppm. Additional fish inhabitants at the site included the clupeid *Nematalosa erebi* (Günther, 1868); eel-tailed catfish (*Neosilurus*; probably two species); two other terapontids, *Hephaestus jenkinsi* (Whitley, 1945) and *Leiopotherapon unicolor* (Günther, 1859); rainbowfish, *Melanotaenia splendida australis* (Castelnau, 1875); an apogonid, *Glossamia aprion* (Richardson, 1842); a toxotid, *Toxotes chatareus* (Hamilton, 1822); and the megalopid, *Megalops cyprinoides* (Broussonet, 1782).

Limestone Gorge, where the holotype was gill-netted, is on the East Baines River, a tributary of the Victoria River. The habitat is a wide (18 m across), slowly-flowing waterbody, 3 m deep, steep-sided and partly shaded by abundant *Pandanus aquaticus* and mixed tall trees (*Nauclea orientalis*, *Ficus racemosa* and *Melaleuca argentea*). There was a moderate amount of the aquatic plant *Myriophyllum verrucosum*, and a

rocky substrate. Subsurface water temperature was 21°C, with 6.5% dissolved oxygen. Thirteen other fish species were recorded: the clupeid *Nematalosa erebi*; the belonid *Strongylura krefftii* (Günther, 1866); the ariid catfish *Arius leptaspis* (Bleeker, 1862); the three terapontids *Amniataba percoides* (Günther, 1864); *Heplaestus jenkinsi*, *Syncomistes butleri* Vari, 1978; the rainbowfish *Melanotaenia splendida australis*; a mullet *Liza alata* (Steindachner, 1892); the apogonid *Glossamia aprion*; a toxotid *Toxotes chatareus*; the megalopid *Megalops cyprinoides*; the gudgeon *Oxyeleotris lineolatus* (Steindachner, 1867); and the gobiid *Glossogobius aureus* Akihito and Meguro, 1975.

Etymology. The species is named *neili* for Queensland resident Mr Arthur Neil, in recognition of his generous collecting assistance to S. H. Midgley. He was instrumental in collecting most of the type specimens of *S. neili* and has rendered considerable field assistance in the past.

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